

**METHOD AND APPARATUS FOR CONTROLLING UPLINK POWER  
TO MAINTAIN DESIRED FRAME ERROR RATE IN A  
WIRELESS COMMUNICATIONS SYSTEM**

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**Abstract of the Disclosure**

In the absence of a continuous channel from the mobile terminal that incorporates a CRC in each transmitted frame from which the base station can derive a power control signal for feedback to the mobile station for maintaining the mobile station's pilot  $E_b/N_0$  level at a desired target that corresponds to a particular frame error rate, the pilot signal received by the base station from the mobile terminal itself is arranged in a frame format. Each pilot frame is compared with an *a priori* known transmitted pilot signal bit pattern to determine whether it has been received in error. In response to a comparison of a received pilot frame with the expected known bit pattern of the pilot frame, an error signal is derived, which in the described embodiment is either a step-up or step-down signal that is fed back to the mobile terminal to increase or decrease its transmitted pilot  $E_b/N_0$  level, respectively.